

Graduation Book of my
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VALEDICTORY

DELIVERED AT THE ANNUAL COMMENCEMENT

OF THE

Medical Department

OF

GEORGETOWN COLLEGE.

BY THOMAS ANTISELL, M. D.,

PROFESSOR OF MILITARY SURGERY, PHYSIOLOGY, AND HYGIENE.

March 3, 1864.

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WASHINGTON, D. C.

GIBSON BROTHERS, PRINTERS.

1864.

Given By Dr. M. L. Turner

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GEORGETOWN, D. C., MARCH 3, 1864.

SIR,—

The undersigned, on behalf of the Students of the MEDICAL DEPARTMENT OF GEORGETOWN COLLEGE, appreciating the value of your Valedictory delivered this day, respectfully request a copy thereof for publication.

Very respectfully,

J. M. D. FRANCE,

E. D. WRAY,

FRANK S. WALSH,

SAMUEL HOLMAN,

EDW. S. THOMPSON,

EDW. MORAN,

COMMITTEE.

THOMAS ANTISELL, M. D., PROFESSOR OF MILITARY SURGERY, PHYSIOLOGY, AND HYGIENE.

GEORGETOWN, D. C., MARCH 4, 1864.

GENTLEMEN,—

In compliance with your request I have the honor to forward the copy of the COMMENCEMENT DISCOURSE, and at the same time to express my sense of the honor conferred, and the gratification which it affords me in learning that you have deemed it worthy of publication, and remain, Gentlemen,

Your obliged,

THOMAS ANTISELL.

To Messrs. FRANCE, WRAY, WALSH, HOLMAN, THOMPSON, and MORAN,

Committee of the Class of Session 1863-4.

Valedictory Address.

—ooo—

GENTLEMEN OF THE GRADUATING CLASS OF 1863-4:

HAVING devoted the allotted period of Medical Study, and fulfilled all the requirements of the Medical Faculty, and having been subjected to a series of examinations intended to test the amount of your knowledge, you have now received the highest honor it is in the power of this or any University to bestow—the degree of Doctor in Medicine.

All scholastic connection between the Faculty and the late student now ceases, and your time, talents, and opportunities are to be occupied with the battle of life on becoming the members of so honorable and liberal a profession.

While, to the Professors, this is but the return of another season in which a few young men are added to the ranks of practice, to you it is an epoch surrounded with circumstances which never presents itself to you again, and on this account, in accordance with time-honored custom, a member of the Faculty addresses you with remarks pertinent to the occasion.

You will be called upon to perform very serious duties in life. You become the guardian of the race, ushering weak and puny humanity into the busy world, watching over the childish and adolescent years; upholding manhood from the destructive influences around; and when you can no longer preserve life, it is yours to alleviate the sufferings which accompany the shuffling off of this mortal coil.

You have social duties, also, to perform. You will advise the public in all matters relating to health. You are to aid the law in deciding points of almost metaphysical subtlety regarding aberration of the mind; and you have the regulation of the hygienic conditions of armies, fleets, and even of the whole nation.

It is scarcely possible to conceive of duties more serious than these; duties which, to perform well, needs the cultivation of all your powers for a life of integrity and usefulness.

Being, as we trust, prepared for this duty of life, it is not proposed before this goodly assembly to lecture you on any

strictly professional topic; and on the present occasion I shall, therefore, occupy your attention by laying before you a historical sketch of the method of Education in Medicine at various periods of civilization, and especially in what consist the true doors of knowledge in your day. If we have improved in old times in our art it is certainly due to the accumulated information of the past which has been laid before us: it was the duty in that time to study the past. If we desire to improve in our day, it is not by the study of the past, except as a matter of history, but rather by an awakened attention to the improvements of the present. If we look back into the dim vista of an almost fabulous historical period, we find, among the early European nations, as among all barbarous people, disease looked upon as the visitation and punishment of an Offended Deity. They believed the world to be peopled with picturesque deities who inhabited mountains, vallies, and groves—spirits who made the fountain bubble up, or presided over the growth of the tree—fawns, dryads, hamadryads, and nereids. To propitiate these gods was the only means by which it was then considered possible to be cured; and it was the practice of the sick to visit the heathen temples and appease the anger of the god by an offering, or present a gift in return for their recovery. Along with the gift was handed in a written statement of the symptoms of the disease, with the mode of cure, which was hung up on the walls of the temples of *Æsculapius*, and thus was initiated a history of disease or of medical cases. Crude and full of error and of superstition these were no doubt, but still it was the only means then existing whereby a knowledge of the approach of disease and of its results could be obtained.

By degrees the temples of *Æsculapius*, or *Asclepions*, multiplied, and the Votive Tablets, as these histories were called, were preserved for inspection and consultation by those who were supposed to suffer similarly. The priests, who preserved these, were the first physicians. By degrees a set of men, not in the priestly office, made it their business to consult the tablets, and the earliest method of teaching was that where the pupil, accompanying the teacher, consulted the Votive Tablets of those patients who had been cured of disease.

This practice gave a certain experience to the teacher, who gradually drew a practice round him of patients who came to the Asclepion or temple to consult him. In time each Asclepion had its renowned physician who collected pupils around him; and the Asclepion, in its mode of instruction, resembled very much the modern dispensary prac-

tice, where the pupil, after seeing a patient within the building, visited him afterward at his own home until cured. This mode of teaching lasted nearly 800 years in Western Asia and Europe from the time of Hippocrates B. C. 400 to the period of the destruction of the temples (in which the Asclepions were included) at Byzantium under the reign of Theodosius in 390 A. D.

The Christian spirit of these times was evinced even in the closure and destruction of the temples of the gods. As the Asclepion had been of acknowledged benefit to humanity, some substitute for it had to be supplied, and public buildings were set apart for the reception of the sick coming from a distance to consult the physicians of the cities; and thus commenced the formation of the institutions approaching but not fully corresponding to the modern hospital.

During this long period of Asclepion instruction a gradual change had been going on in the mode of acquiring medical knowledge. The Ptolemies in African Alexandria were patrons of all the art and science of their day. Learned men were invited by them to that city, which soon became one of the shining beacons in the civilization of the Mediterranean shores. Besides the large libraries established there the Museum was formed by Ptolemy Philadelphus, in which four faculties were taught—Mathematics, Medicine, Literature, and Astronomy. The most eminent teachers of that day in Medicine were to be found there, and opportunities for anatomical instruction were afforded. To make the education more complete, the Serapion, or temple of Serapis, corresponding in some degree to the Greek Asclepion, was established near the Museum, in which the sick were received, and persons were admitted to study disease; and we have thus in Alexandria developed the more complete mode of instruction, consisting of that given in the Museum or College and that given in the Serapion, corresponding to clinical practice.

Here a great and manifest improvement in the mode of teaching was added by Africa to the more simple Asiatic instruction.

When the followers of Mahomet (A. D. 638) entered Africa by Egypt they overthrew the worship and the temples of Isis; and, in an unguarded moment, the Museum was demolished, the school of instruction scattered abroad, and a library said to have been consumed in the strife. The conquerors strove to replace the ruin, but notwithstanding the zeal for learning and science displayed by the Arabs, Alexandria never recovered her literary position, and the dicta of Galen, the speculations of Democritus, and the metaphysics

of Aristotle ceased any longer to be the chief sources of Medical instruction.

On the destruction of the Alexandrian School, Medicine took refuge with the wandering and exiled Jews. After the destruction of Jerusalem the empires adjoining were flooded by Jewish schools. The educated Jews settled in Alexandria ; and, after the Arab conquest, they kept up the Greek teachings wherever they went. But their influence was limited in time, although spread over the then civilized earth. Nor were they alone in this work, for, driven out of Constantinople, the Nestorian Christians carried away with them, and became the depositaries of, the Old Greek Medical Science. " Its great names they revered. They collected with the utmost assiduity whatever works remained on Medical topics, whether of a Greek or Alexandrian origin, from the writings of Hippocrates, called with affectionate veneration by his successors, ' the divine old man,' down to those of the Ptolemaic school."*

These Christians, being more educated than the surrounding heathen in their Medical Practice, were associated with the Jews ; and with these people, by their contact with the Arabs, spreading into Mesopotamia and Syria, taught that wonderful people the value of Greek and Alexandrian Medicine. But they mingled Oriental Philosophy with their instruction ; they inculcated planetary influences and the doctrine of indwelling and animating spirits in everything, whether living or lifeless, ideas that can hardly yet be extirpated by the light of a nineteenth century Christianity. The tendency of the human mind, when in its uneducated condition, to refer all cause and effects not otherwise explicable, to the action of powers and influences more than earthly—*omne ignotum pro mirabile*—is remarkable. To do away with this Hippocrates labored with energy. When philosophy first left the temples of the gods it declared that every thing was either water, air, or fire. We smile, perhaps, now at the seeming childishness which declared it, but it was a great advance in its day, and by pointing out that an excess or deficiency of any of these elements constituted disease, it aimed a blow at the connection of the worship of the gods with Medicine, which it never recovered in Greece. Among the practical Romans planetary influences supplanted the anger of the gods as causes of disease. A passage in Aulus Gellius, in his " Attic Nights," tells us that the muscular fibre grew larger, oysters grew fatter, and the eyes of cats fuller as the moon increased, and that they dwindled in like manner on its wane.

* Draper's Intellectual Development, *passim*.

Still later in time the belief in demons, witches, and vampires superseded the trust in the gods and led to charms, amulets, and incantations to preserve humanity from diseases.

This excess of spiritualism has infused itself in Christianity under the form of a belief in special providences and of the direct interference of the Deity in the order of nature. This opinion in our own times appears sometimes ludicrously put. Thus Professor GROSS, in his American Medical Biography, in describing Dr. JOHN GODMAN, one of the Medical celebrities of the day, states that, being of the highly unctuous school of Christianity, he was prevented from studying Medicine by the special interference of the Divine Ruler of Events, but that he afterwards reverted to that pursuit through the friendly interposition of Dr. DAVIDGE.

Indeed we are yet scarcely rid of charms and amulets, and we have a temple of Isis in every city, where the spirits of the living and the dead can be raised up and interrogated, or the soul of a table or piano may be so disturbed as to make them take on the power of locomotion.

The inquiring and energetic Arab adopted Medical Science, and, with the zeal of new believers, pushed forward its improvement with rapidity. They would try and disentomb the deific essence out of every object in nature worth investigating ; they experimented with every thing ; they acted on them with acids, which they themselves produced ; they tortured them with fire to draw the spirit out of them, and thus Alchemy was the origin and the first steps in the development of our modern Chemistry. The Arab would not only investigate, but he would teach. When the Abassides Caliphs moved to Bagdad they established a school of Medicine there, and the world-renowned Haroun Al Raschid not only increased their number in the dominions of the faithful, but he wrote to Charlemagne in Europe, as being a wise man and powerful monarch, advising him to cultivate learning by the establishment of schools, advice which that monarch speedily adopted.

About the time of the establishment of the school at Bagdad the dissensions among the Mussulman leaders drove them into Africa, and the Emir Abderahman having reached the modern Morocco passed over into Spain, and, by easy conquests, brought a large portion of its fair lands under his rule ; he fixed his capital at Cordova, and having established the practice of opening a school and a hospital in connexion with every Mosque, he at once enlightened that country ; he founded a Medical School at Cordova, which drew pupils from and furnished teachers to a large portion of Western Europe : these teachers were Jews and Arabs, who were in

direct communication with Alexandria and Bagdad. Medical authors were translated, and Medicine never was more energetically cultivated nor more honorably pursued than under the rule of the Arabs, which, extending from the Caspian Sea to the borders of Portugal, made Arabian Medicine an enlightened and a popular science over an extent of three thousand miles.

Here is a picture of the life of a fashionable and prosperous Jewish physician of the twelfth century, given in a letter of the Rabbi Mosch Ben Maiemon, a native of Cordova, but afterwards practising at Cairo. "I reside," he writes to a friend "at the Egyptian capital, and am in terms of the greatest privacy with the Grand Sultan, whom, in the discharge of my duty, I visit daily morning and evening; and when he or any of his sons or the ladies of the harem are unwell I remain in the palace the whole day. It is, besides, my duty to visit the principal state officers in their illnesses. When I go to the Court in the morning and meet nothing new to detain me, I return at mid-day to my own house, which I find full of Jew and Gentile nobility and commonalty, judges and merchants, friends, and even some who are no friends, awaiting me. As soon as I arrive I salute them civilly, and beg them to allow me to take some refreshment; and then leaving the table, I busy myself with inquiring into their ailments, and direct the necessary remedies. Many there are who are obliged to wait until night because the attendance is so numerous that I am occupied with them the whole afternoon; and sometimes I am so worn out and overcome with drowsiness that I drop over asleep while conversing, unable to utter another syllable."*

The school at Cordova had a library of 250,000 volumes, furnished by the Emir Alhakem 2d, and so famous had its teachings become that in other cities of the Moslem dominion in Spain new hospitals and schools were established, and so valuable was this two-fold mode of instruction felt to be that when Cordova surrendered to the Christians in 1226, and the Moors were finally driven from Spain, the schools of Medicine remained and prospered for nearly three centuries longer (1512.) The sway of Arabian Medicine was exerted for eight hundred years, and, while we cannot praise it too highly on account of the learning of its teachers, and the mode of teaching by experiment and illustration, peculiar then to that school, we should perhaps hardly regret that the causes which led to its introduction into Europe were the causes which led to its abandonment and decay. The

migration of the Arab into Africa brought it into Europe ; the migration of the Turks to Constantinople drove it out. When a weak monarch of a dissolving empire called upon Mahomet 2d to secure him in the possession of the capital of the Eastern kingdom of European civilization the warlike Arab entered Byzantium and destroyed the last remains of the Greek empire of the East (1453 A. D.)

The Greek learning and the Christian hospitals which had been established in that city then suddenly disappeared ; the learned men emigrated into the more westerly kingdoms of Europe, joined the schools which had been connected with the monasteries and abbeys in Italy, France, and Spain ; and the schools of Charlemagne, founded at the advice of the Arab, became the future University of France—the rivals of the schools of the Caliphs, the successful rivals by reason of a purer teaching.

It is remarkable of Saracenic Medicine, as it is called, that there never was infused into it any of the religions of the Crescent. When the Moslem conquered he was generous : he ceased to persecute. The spirit of toleration was of the most liberal character in Moorish Spain, and the medical teachings of the Arabs, after eight centuries of residence, preserved the evil traces of its Asiatic and Alexandrian origin. As before stated, the polytheism of Mesopotamia, the pharisaic spiritualism of the Jew, and the indwelling daemonology of Africa were combined in the school of Medicine of Spain. From all such ideas as these the followers of Mahomet turned away with disgust, yet, having nothing better to offer, they permitted the teaching ; but when the Greek learning was thrown back on Europe in the fifteenth century, and when printing had been just adopted, the teachers of medicine saw at once the superiority of the old Hippocratic medicine over Galen and Avicenna, and from that time forward, even in the schools of Spain, the old school prevailed in doctrine while the Arab method of teaching was incorporated therewith.

Hippocrates had taught that the immediate causes of disease lay not in the anger of an offended Deity but in the human constitution ; that the latter was liable to change by exposure to external agents ; that it was modified by climate, season, and mode of life, and not by visitations of a Superior Power. He separated Pagan Theology from Medicine, and taught his disciples to examine the frame itself for mutations of health ; he taught them blood alterations ; blood poisons : critical days and expectations of cure within the system. How different this from the Syrian notions of diseases being produced by the entrance of spirits and devils into the sick :

of exorcism and the capability of controlling the evil spirit of a disease by the more powerful influence of a planet!

Hippocrates never troubled his followers with the nature of disease; he described rather the course and the terminations of the illness than busied himself with imagining ruling influences. The revival of his mode of teaching in Europe happily gave a new impetus to medicine by making men more solicitous about the outer aspect of nature rather than busied with her inner movements. The arbitrary conceits of the Galeno-Arabian school were banished from science, and replaced by the surer harvest to be gathered from actual observation as directed toward the development of abstract truths or laws.

I cannot quit the subject of the influence of the Arabs on Medicine, and the improvement in the mode of teaching adopted by them without contrasting that people with those whom they conquered; and what a lasting benefit to humanity their invasion of Spain has been.

When the Moors crossed over the Straits of Gibraltar they found the natives of Spain, like those of the rest of Europe, sunk in barbarism hardly emerged from the savage state, uncleanly in person, benighted in mind, inhabiting huts, in which it was a mark of wealth if there were bulrushes on the floor and straw mats against the wall; miserably fed on beans, vetches, roots, and even the bark of trees; clad in garments of untanned skin, or, at the best, of leather, perennial in durability but not conducive to personal purity, a state in which the pomp of royalty was sufficiently and satisfactorily manifested in the equipage of the sovereign, an ox cart, drawn by not less than two yokes of cattle, quickened in their movements by the goads of pedestrian serfs whose limbs were wrapped in wisps of straw: such was the people who were conquered.*

On the other hand the Mahomedans, when they entered Spain brought with them all the luxuries and the tastes of Asia; they built splendid palaces of a noble architecture, with polished marble balconies and orange gardens attached; courts with cascades of water; shady retreats for the heat of the day; retiring rooms, vaulted with stained glass, over which streams of water trickled; walls and floors of exquisite Mosaic; fountains of quicksilver in apartments ventilated by air drawn across flowers; hypocausts or air furnaces for winter; walls adorned with arabesques and paintings; chandeliers of colossal size hanging from the ceilings; pilasters of verd antique crusted with lapis lazuli; furniture of sandal

and citron wood, inlaid with mother of pearl, ivory, silver, and gold ; vases of rock crystal and Chinese porcelain ; Persian carpets on the floor ; warm and cold water pipes in marble bath rooms ; whispering galleries for the women ; play-courts for the children, and grand libraries for the master himself. The Khalifs of Cordova were the patrons of learning, and set an example of refinement strangely in contrast with the condition of the native European princes.

Cordova under their rule, when at its highest prosperity, boasted of more than two hundred thousand houses, and more than a million of inhabitants. After sunset one might walk through it in a straight line for ten miles by the light of the public lamps at a time when for 700 years after there was not so much as a public lamp in London. Every street was paved ; nor was this civilization confined to one city. Granada, Seville, and Toledo were the rivals of Cordova. At this time not even a palace in Christian Europe had either a window or a chimney. Loop-holes let in the light : a flag-stone on the floor was the fire-place ; the soot and colly begrimed the faces of the occupiers of the apartments, and a low doorway, under which you stooped on entrance, was the only door or protection from the cold.

In Spain the Arabs established manufactories of silk, cotton, and linen ; all kinds of textures from looms, ornamental jewelry and filigree work ; they planned ornamental gardens, artificial fish-ponds, and aviaries of rare birds.

They were cleanly to a fault. They taught Europe the habit of changing inner garments. In fine, whether in peace or war, in letters or in science, the Arabs left their impress of refinement, which has been handed down to our day. They regulated their agriculture by law, and introduced new plants into use ; to them, along with a thousand other things, we owe the introduction of cotton, sugar, rice, and silk, gunpowder, and artillery, and, above all, the mariner's compass.

One can scarcely look on these two pictures without regretting the course of events which ended in rolling this people back again into Africa, and without wonder at the result. Their civilization disappeared along with themselves, and that part of Europe occupied by them relapsed into its primitive barbarism, from which it has not yet wholly recovered.

Since the days of Moorish Medicine down almost to our own time, the methods of teaching have not altered. They are still those of the college and the hospital—they are essentially Saracenic, oral and demonstrative. In our time an additional method of instruction has crept in.

Absorbed in the old system of teaching, and listening exclusively to the lecturer, a careless observer may forget the new power which has sprung up in our midst since the commencement of this century, and bids fair to alter in a remarkable degree the science of medical teaching. That revolution is impending, has already begun ; but with so silent steps advancing we may perhaps under estimate its extent or importance.

Time was as yesterday to a few of us in which the influence of the periodical press on the state and progress of Medicine was so fitful and equivocal as to be hardly worth the labor of editing ; bulky volumes were produced occasionally, which adorned the shelf of the possessor. The labor of years of experiments was delayed in publication until the whole was completed and published as one work. The quarterly, monthly, and weekly medical serials had not as yet appeared. It was not deemed reputable for a man in large practice to come before the world as an editor or contributor to these periodicals. When Mr. Wakley first started the *Lancet* in London the proceeding was looked upon as a *ruse* whereby power might be obtained by an individual for his own advantage, and not as a means of educating medical men to the standard of the day—just as at the present time we should look upon the efforts of that physician who desired to succeed in his profession by entering the common council or joining a church society. The medical press, thirty years ago, hardly produced articles of daily or hourly necessity. Its reading did not run in lines of direction useful to practical men. The teachers and lecturers held aloof from it, and hesitated to take advantage of the additional influence which this publicity gave them over the medical mind.

But this mighty never-ending engine of man's most enduring labor is irresistible in its effects. Fed by hundreds of able minds in our profession, and directed in its movement by the most skilful of our master craftsmen, it has become more influential than the school, because more universal in its teaching. Who is he now who never reads, or ignores the journals, but the most audacious of idlers or the veriest of simpletons.

The finest medical minds do not hesitate to publish, for they know that the mass of practising medical men are their pupils for the time, and willing to receive their instruction, provided it is *brought home to them*. A Cooper, a Velpeau, or a Gross, a Watson, a Rokitansky, or a Clark, can thus address the whole world of practitioners as it were, and thus the press adds another link to the chain of medical brotherhood which binds the profession together over the whole

civilized globe. Could the most eloquent of teachers in the halls of our colleges attain one tithe of that usefulness? The schools of Paris, of Edinburgh, of Tübingen, Dublin, and Giessen of Munich and Vienna have in their turn attracted crowds of hearers by reason of the celebrity of the teachers; but the utility and renown of such localities are of limited extent and duration, while the journals of our day collect and preserve the most valuable current information, carry it to our very doors and offices, and deposit it for future use. The press, then, is a teacher and a chronicler of no mean power. In order to contrast fully these two modes of instruction, that by the press and that from the theatre, let us suppose that one or other of these be suddenly suspended in its operations, and what would be the result?

Suppose that in this country one or two of the most eminent medical schools closed their doors, or even should all the Medical Colleges of the country do so, what effect would it have on Medical practice? The profession for its education would fall back on the practice of sixty years ago, when the pupilage was more extended and its results more valuable than now; and if then able surgeons and physicians were developed under its influence how much more at present when by that occurrence of no collegiate teaching, the Medical press would still further augment its utility and supply the deficiency.

If every lecture-room were at once and finally closed upon its class, journals and hospital practice remaining, would any harm come of it? would learning and instruction cease? would there be one teacher, one pupil the less? The talent shut out from the lecture-room would show itself as usefully and more extensively by the opportunities of publication; and it is most certainly true that the collective interests of Medicine would not suffer, and that the public at large would more likely be the gainer. Perhaps to the pupil it would be a large gain. The money paid to teachers now would then go for purchase of books, plates, microscope, chemical apparatus and other appliances; and always supposing him well inclined and well directed the absence of a school would be no loss to him.

On the other hand, give us all the existing schools and take away the medical press, and who are reached by our teachings? Students chiefly. A few practitioners perhaps in early life would return for some special light or benefit; but the large mass of medical practitioners, occupied fully with their daily duties, unable to attend, and having nothing to recall or renew their education now slipping away from them, by degrees would, at the close of their life, be less

useful members than at the beginning. The individual Physician would not be benefitted, and the public would certainly be the loser by the lowered standard of the Medical attendant.

The teachings of Medicine are, then, accomplished by the joint aid of the *Hospital*, *School* and the *Press* : nor is this conjoined mode of education peculiar to Medicine : it is found creeping in and intruding in arts and in religion. The preachers of our day are continually deplored the apathy of congregations and the paucity of listeners to their discourses; the press has become their rival also ; and since the public may sit at the feet of a Chalmers and other illustrious dead, at their own firesides, they may possibly prefer their productions to unwinnowed and tame discourses of the living preacher—discourses such as the Rev. Robt. Hall had in his mind when he uttered his famous stricture upon the preachers of his day: “The best passage,” said he, “in many a sermon is the passage from the pulpit to the vestry.”

While there are some branches of Medical instruction which can best be learned in the theatre and by oral instruction, as Anatomy and Chemistry, and some by close observation in hospital, as practical Medicine and Surgery—there are yet others which can, perhaps, with more advantage be mastered by the student in his room and from books. “Art is long and life is short,” says Celsus ; and our student life is shorter still. It is not possible to teach more than the mere elements of some departments of Medical knowledge, and some have to be omitted altogether. Some parts of Medical learning are not at all embraced in the curriculum, such as Insanity, and until very lately Hygiene and Medical police.

By stepping in to supply the deficiency in education, the press, then, has to some extent become the rival of the school, and has taught many branches hitherto confined to schools both more effectively and economically. But has it yet superseded the school? Far from it. Within this century, too, has been adopted from Europe a system of clinical instruction, the instruction at the bed-side, the most valuable, the most practical of all, which cannot yet be taught in books. And perhaps it never will supersede oral instruction. As medicine advances mechanical and physiological appliances come to its aid, and as the use of these imply skill in manipulation their use is so much additional necessity for the occupation of the teacher ; no amount of description will teach the use of the stethoscope practically—the laryngoscope, ophthalmoscope, or the microscope.

If more than the merest smattering of Chemistry be de-

manded, the Student must place himself under a teacher, for no amount of reading can communicate that knowledge which enters by the eye and appeals to that sense alone.

The University of London was established about the commencement of the second quarter of this century to grant degrees of medicine to all applicants who, upon examination, came up to a certain standard of education. It mattered nothing where the medical learning had been obtained or whether the candidate had ever been inside the walls of a medical College. He might have learned his chemistry in a mining school, and his anatomy in a zoological Museum, or a school of art: the information was all that was required. To students of such a character the journals and the press became their chief and in some cases their only guides and educators.

Another object which was hoped to be accomplished by the establishment of the University of London was the total separation of classical learning from the curriculum of Medicine. The absurd waste of three or four years spent on the dead languages was at once abolished in that institution; and last and not least the total separation of the educational privilege from that of granting diplomas. In this respect many of our Colleges in this country might imitate the English example.

Medicine is an universal science—it is cosmopolitan, and valued everywhere—and in its advancement, while we start from the leaning handed down through Greek, Roman and Arab, we have received, and are receiving yearly great and wonderful additions and improvements in our Godlike art by the cultivation of the science in every civilized tongue: and fully to improve the advantages thus offered, is to be an educated physician. While it is always a matter of regret that an ignorant man enters the ranks of the profession, the proper nature and extent or standard of education has not been so equally accepted. Up to the second quarter of this century the classical scholar (as it is termed) was held to be properly educated to commence medical studies; that is the college degree in Arts was prescribed as the preliminary in the old Universities; but the immense development of experimental science since 1840 has called for some acquaintance with it rather than with ancient classics in order to understand medical science; and if we desire to know in good time what is actually going on in Europe in medicine or any other science, we must read the journals in the vernacular, and thus the modern languages become of more importance to the medical men than the dead. I have always thought that it would be desirable if some amount of infor-

mation on these two subjects—that is, Experimental Philosophy and Modern Languages (French and German) were required of pupils before matriculation ; and our Universities ought to recognize this necessity by modelling a degree in philosophy which would imply the cultivation and teaching of modern science within their walls ; this degree might be required as a necessary preliminary to graduation in the Doctorate. Such a degree should imply a thorough English education, attendance on courses of experimental philosophy and a proficiency in French and German languages ; and this I believe to be the proper basis on which to raise the medical curriculum.

Gentlemen, it has been customary on occasions like this, in adding the last words, to speak something of honorable conduct, to be guided by religious feeling, of industry, which, in proportion as it is exerted, will produce its reward by giving you enlarged and remunerative practice. I omit the first of these because we have neither taught you ethics nor religion, and we commit you in these matters to the world and the guidance of your own hearts, and with regard to the second, the less that is said on that the better, as at the best they would be but the weak reflex of home taught truths and prayers. The statement that success follows exertion and crowns merit, is a dogma that cannot and never will be true ; it denies all earthly experience, it flouts a revealed hope, and it unteaches truth. We can only tell you it is the duty of life to work—to work that you may live—that without full store of knowledge you have slender chance of success, and that stocked with industry you are ever ready for success ; and that there is also another law, the which neglected, greatly to succeed, is miserably and in truth to fail. We also desire that you will ever preserve a kindly regard for your past teachers as your future friends, and guard the reputation of this University with a jealous eye, as being identified to some extent with your own, that you will add to its lustre by your own good name, which you will never be induced to forfeit, from a love of popularity, a feeling of selfishness, or the hope of gain.

